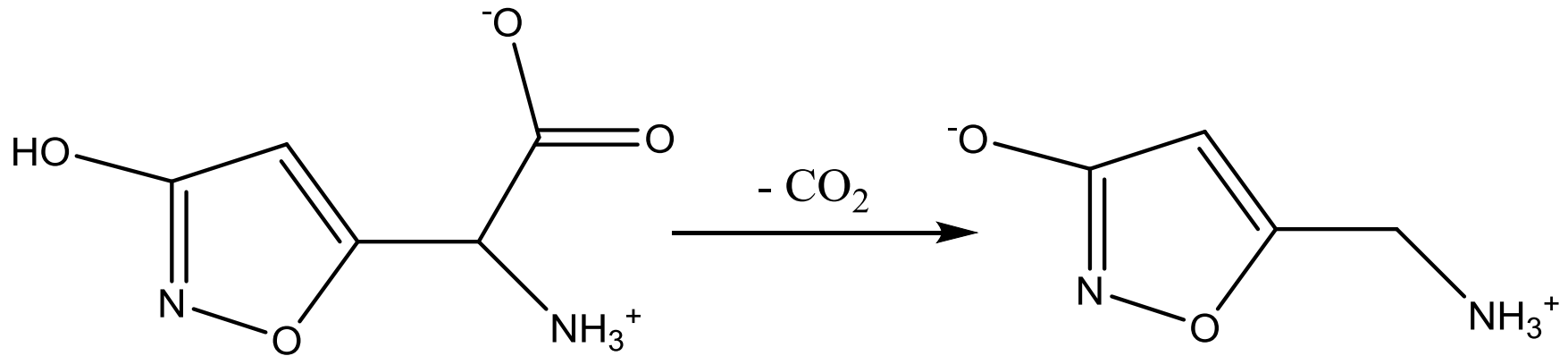


Materiały do Wykładów I i II

Substancje psychoaktywne pochodzenia roślinnego

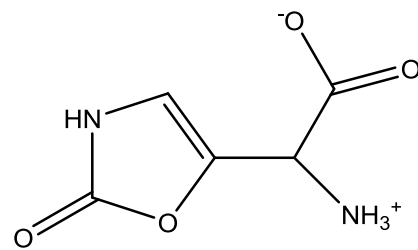
Amanita muscaria



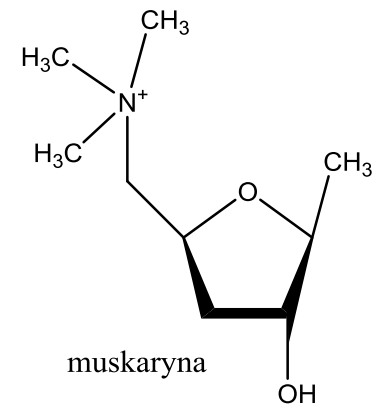
kwasi boteny

muscymol

Kwas (S)-2-amino-2-(3-hydroxyizoxazol-5-ilo) octowy



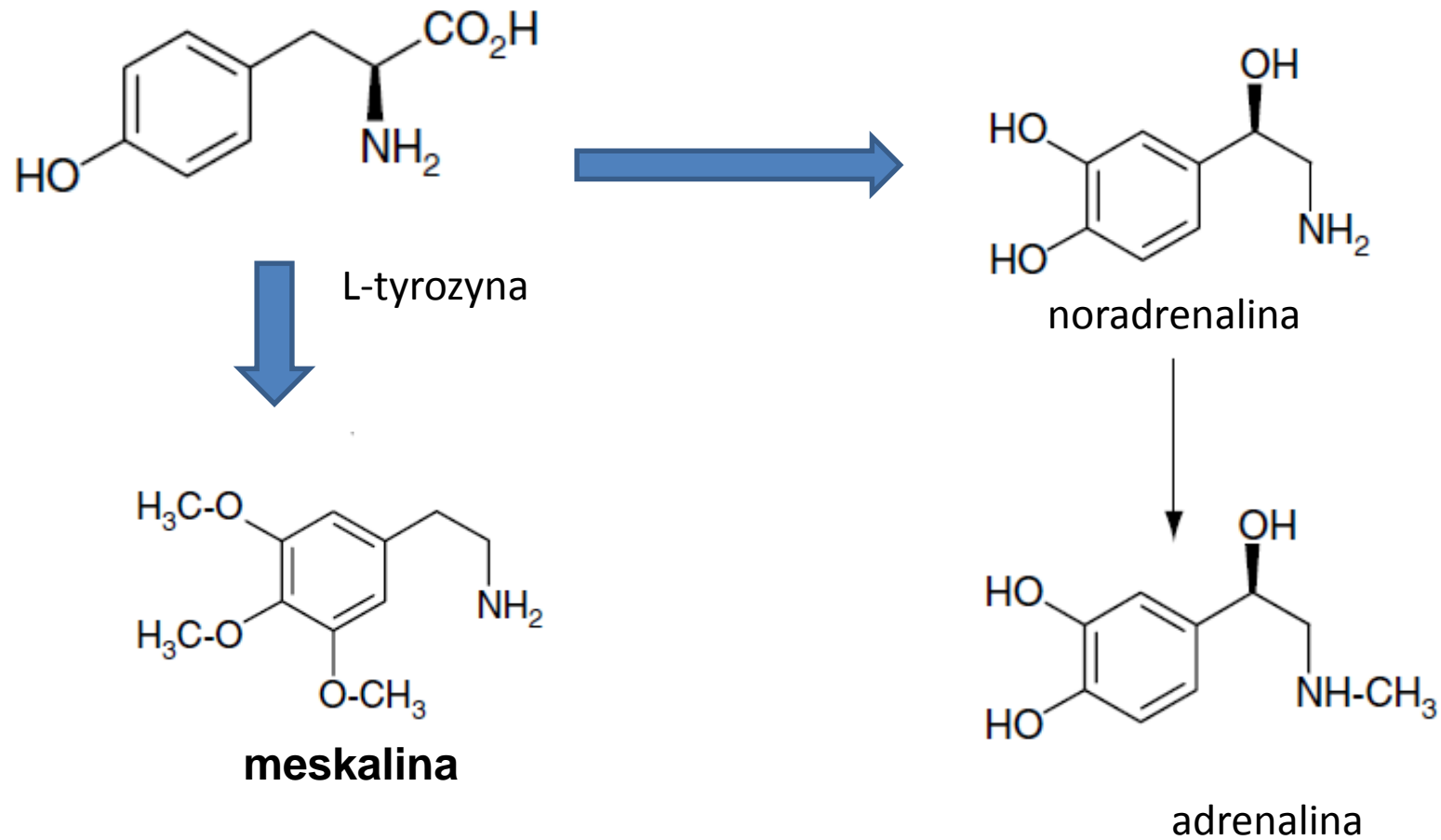
muskazon



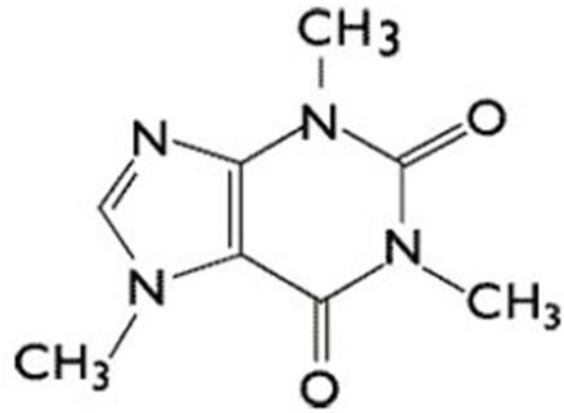
muskaryna

Substancje psychoaktywne pochodzenia roślinnego

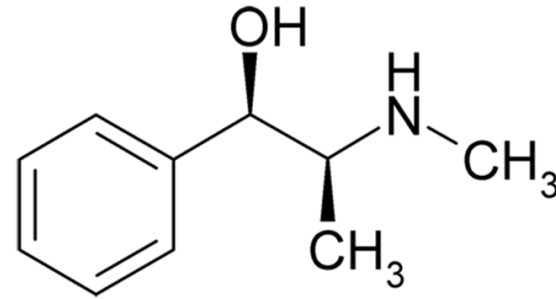
Kaktus pejotl (*Lophophora williamsii*)



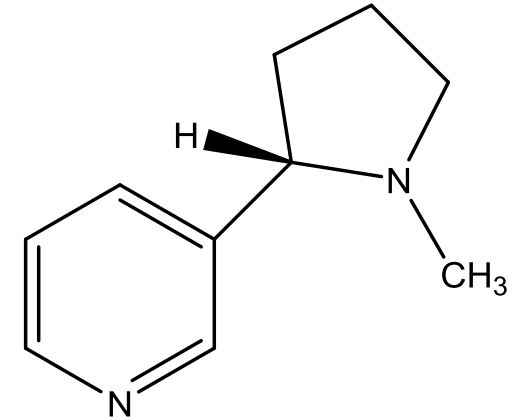
Substancje psychoaktywne pochodzenia roślinnego



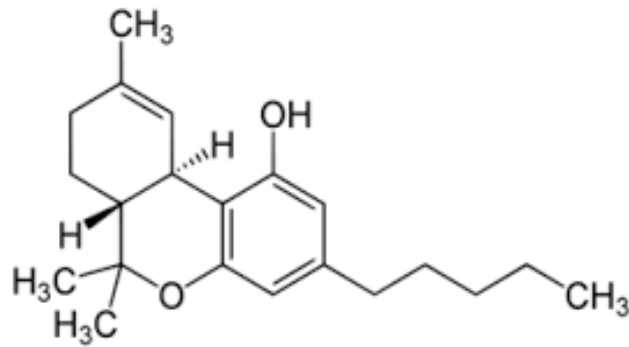
Kofeina (*coffea arabica*)



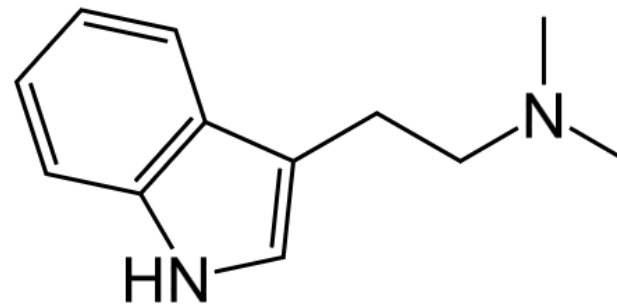
Efedryna (*Ephedra Sinica*)



nikotyna
(*Nicotiana tabacum*)

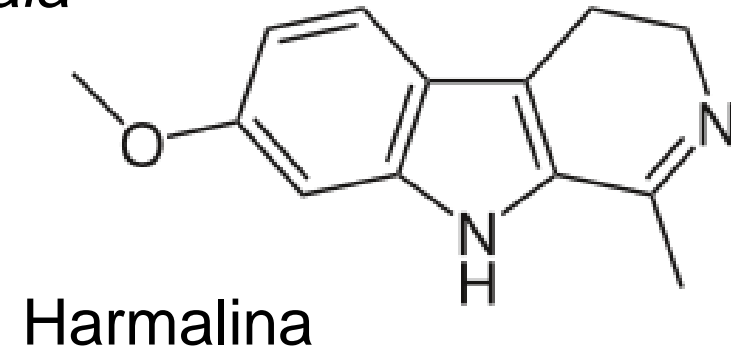
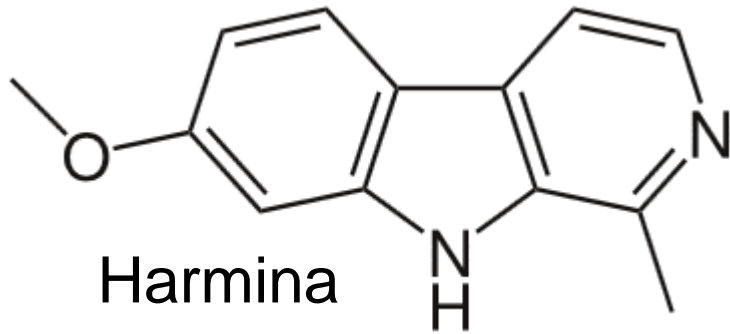


THC (*cannabis*)

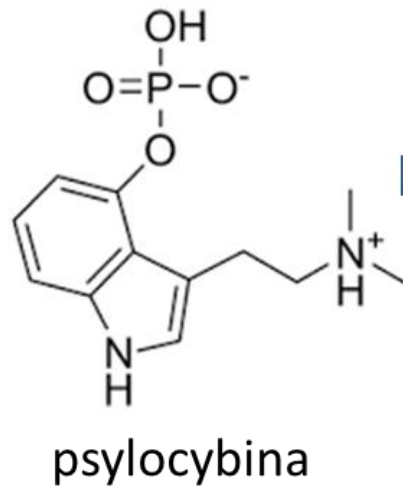


Dimetylotryptaminę (DMT) (*Psychotria viridis*)

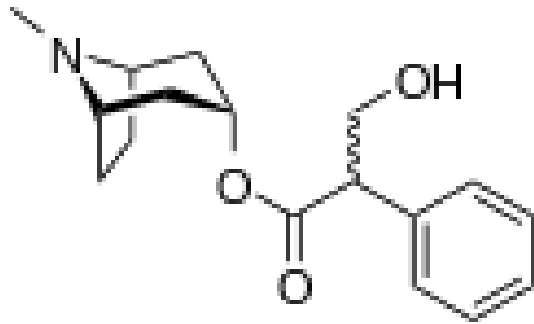
Substancje psychoaktywne pochodzenia roślinnego
Peganum harmala



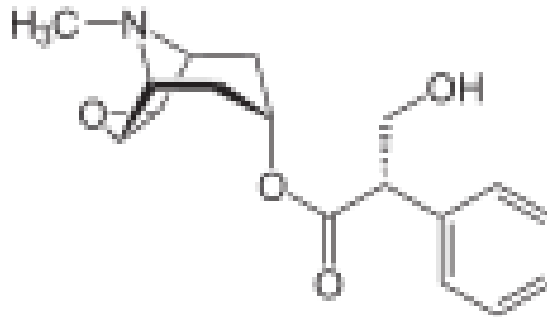
Grzyby psylocybinowe np. *Psilocybe semilanceata*



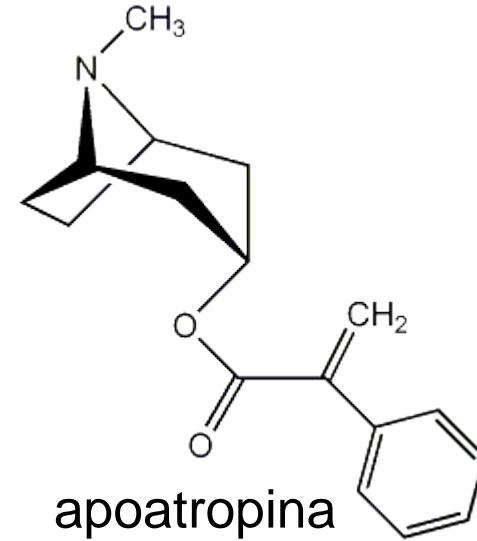
Substancje psychoaktywne pochodzenia roślinnego
atropa belladonna i *datura stramonium*



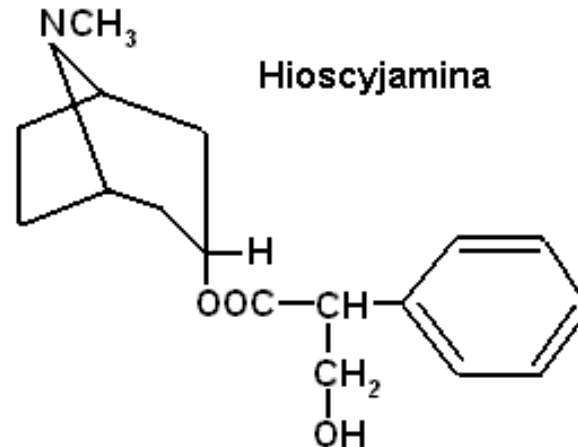
atropina



scopolamina



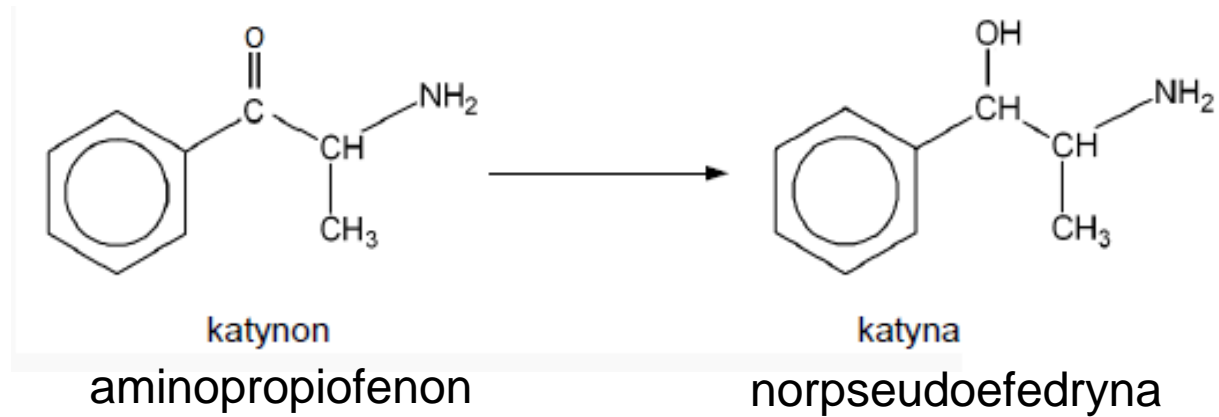
apoatropina



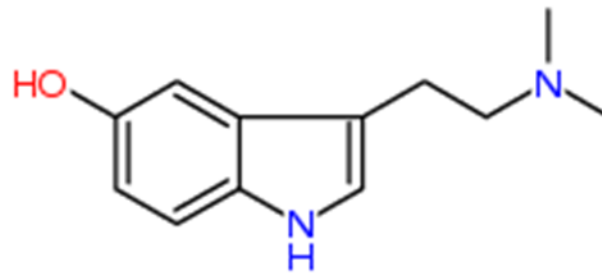
Hioscyamina

Substancje psychoaktywne pochodzenia roślinnego

Khat



Substancje psychoaktywne pochodzenia zwierzęcego



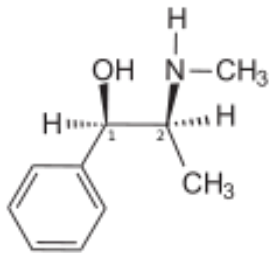
Bufoteina

5-hydroksy-*N,N*-dimetylotryptamina

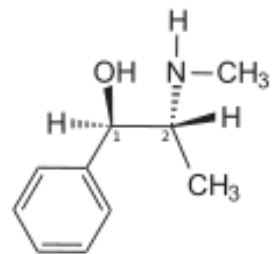
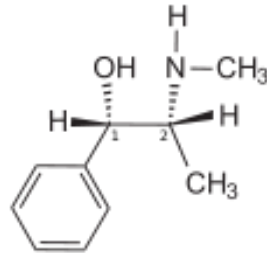
Alkaloidy - podział

- Klasyfikacja alkaloidów wg. budowy chemicznej:
- Pochodne fenylalkilaminy (efedryna, meskalina)

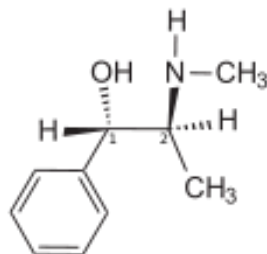
(1R,2S)-(-)-Ephedrine



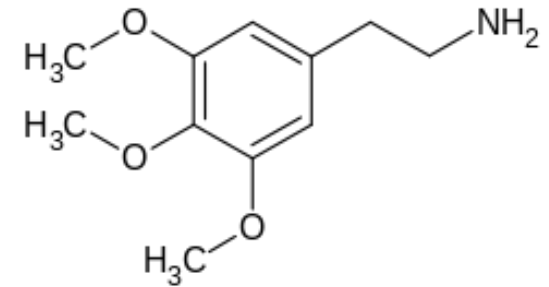
(1S,2R)-(+)-Ephedrine



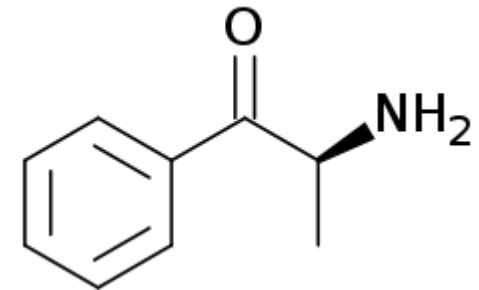
(1R,2R)-(-)-Pseudoephedrine



(1S,2S)-(+)-Pseudoephedrine



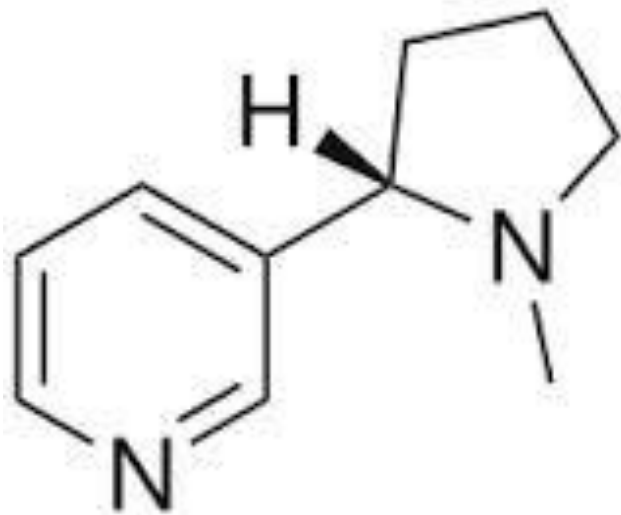
Meskalina



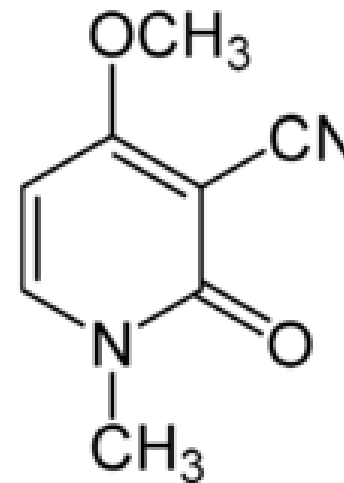
Katynon

Alkaloidy - podział

- Pochodne pirydyny (np. nikotyna, rycynina),



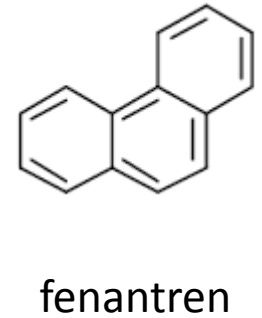
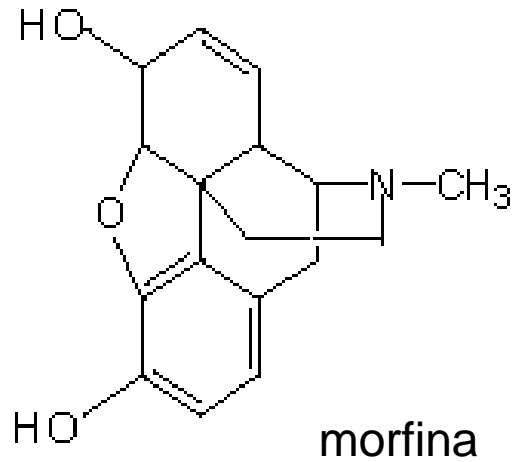
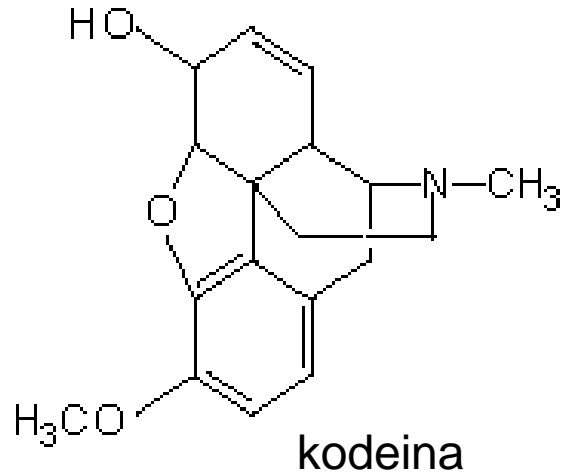
Nikotyna



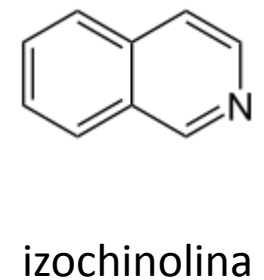
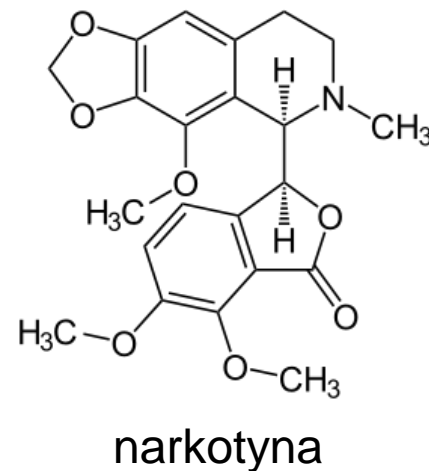
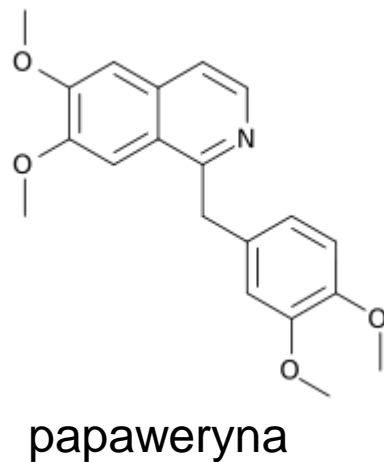
Rycynina

Alkaloidy – podział wg. budowy chemicznej:

- Alkaloidy fenantrenowe (kodeina, morfina, tebaina)

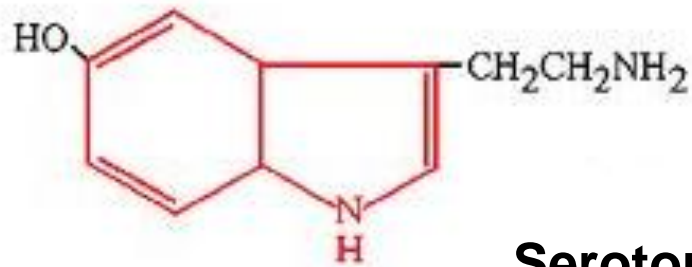


- Pochodne izochinoliny (papaweryna, narkotyna)

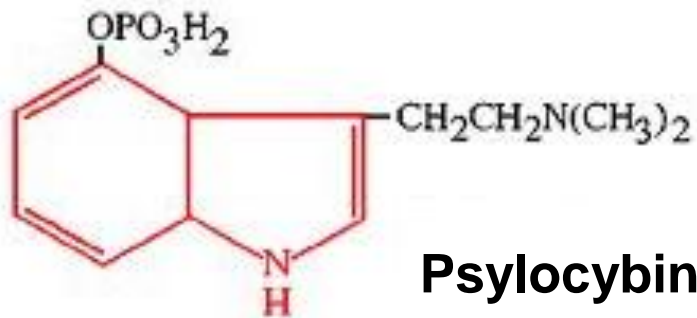


Alkaloidy - podział

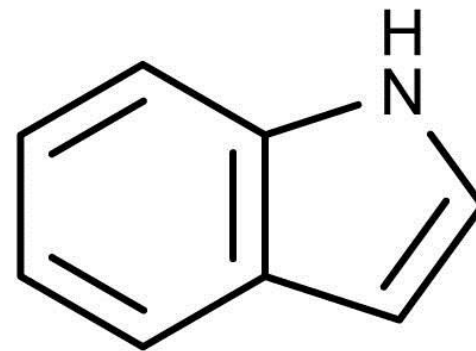
- Pochodne indolu (psylocybina, serotonina, bufoteina),



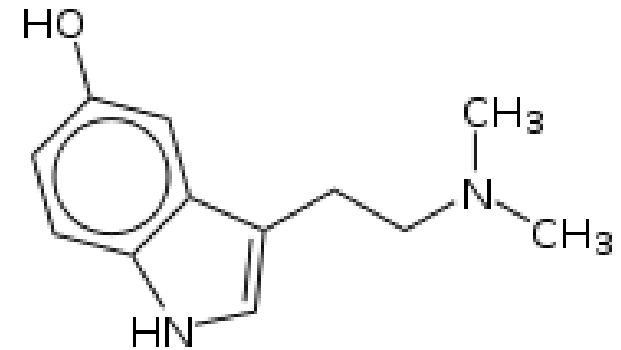
Serotonina



Psylocybina



indol



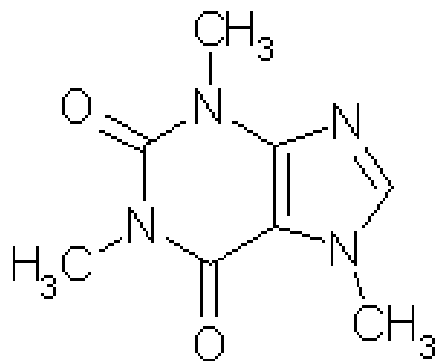
Bufoteina



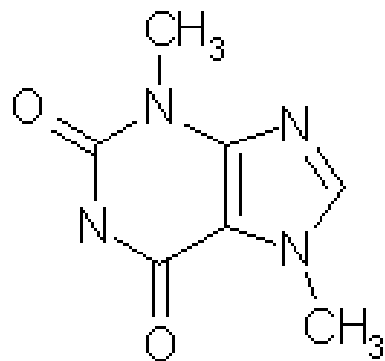
Dimetylotryptamina, DMT

Alkaloidy – podział wg. budowy chemicznej:

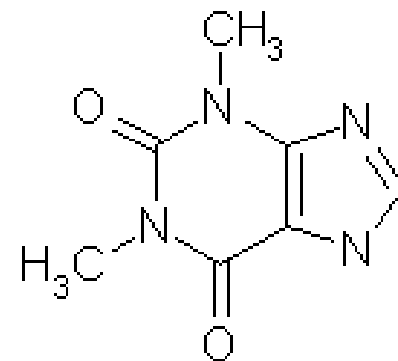
- Pochodne puryny (np. kofeina, teobromina, teofilina),



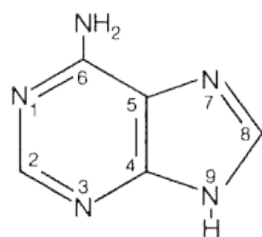
kofeina



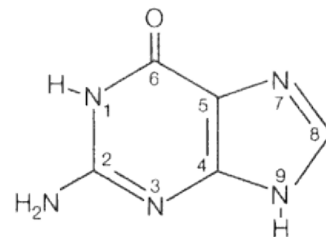
teobromina



teofilina



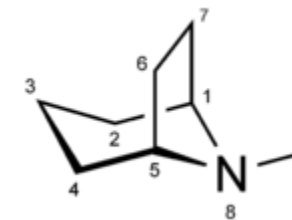
Adenina (A)



Guanina (G)

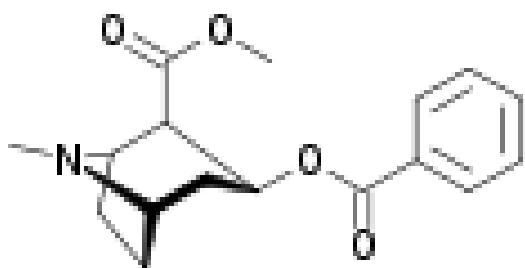
Puryny (zasady purynowe)

Alkaloidy - podział

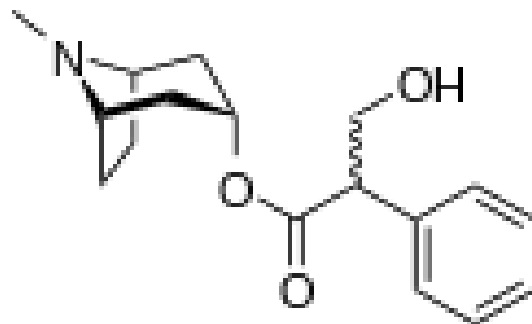


Tropan

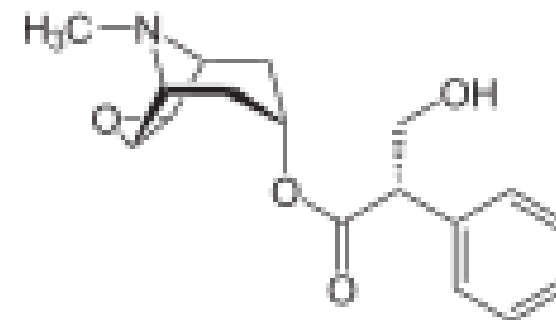
- Pochodne tropanu (kokaina, atropina, skopolamina)



Kokaina



Atropina

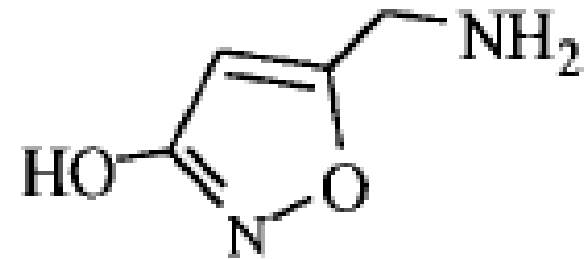
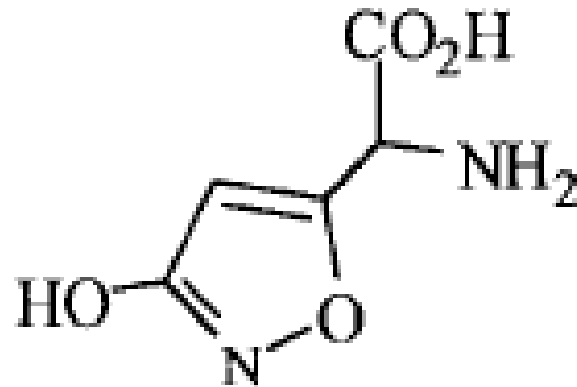


Skopolamina

Alkaloidy – podział wg. budowy chemicznej:

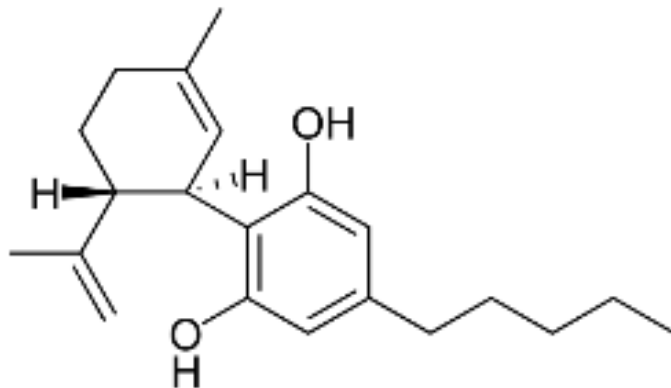
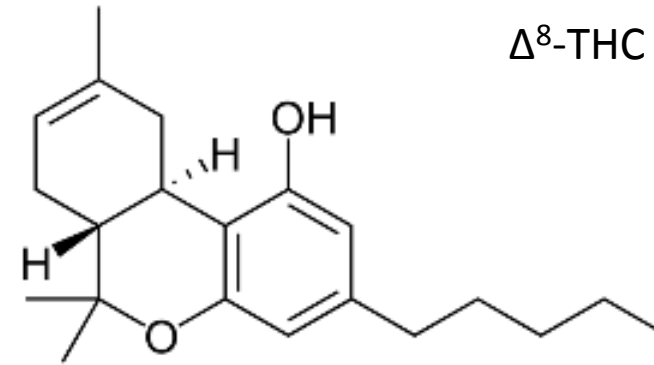
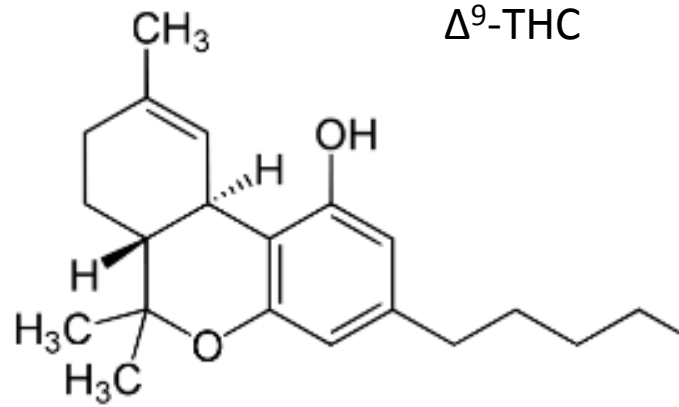
- Pochodne izooksazolu (kwas ibotenowy i muscymol)

Kwas ibotenowy i muscymol

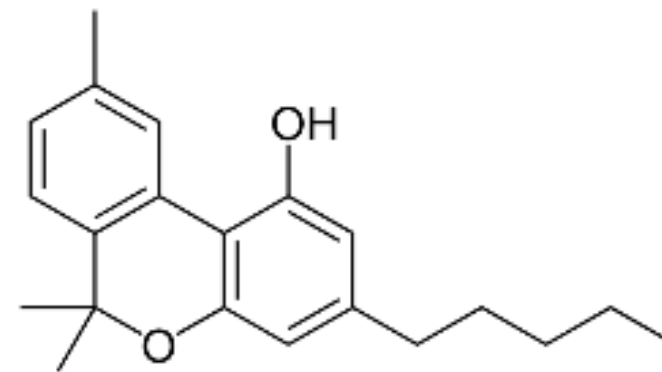


Alkaloidy - podział

Tetrahydrokanabinole



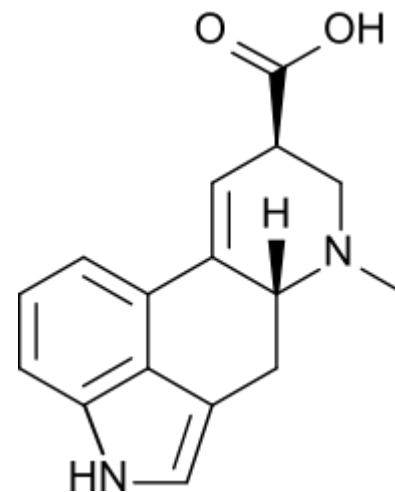
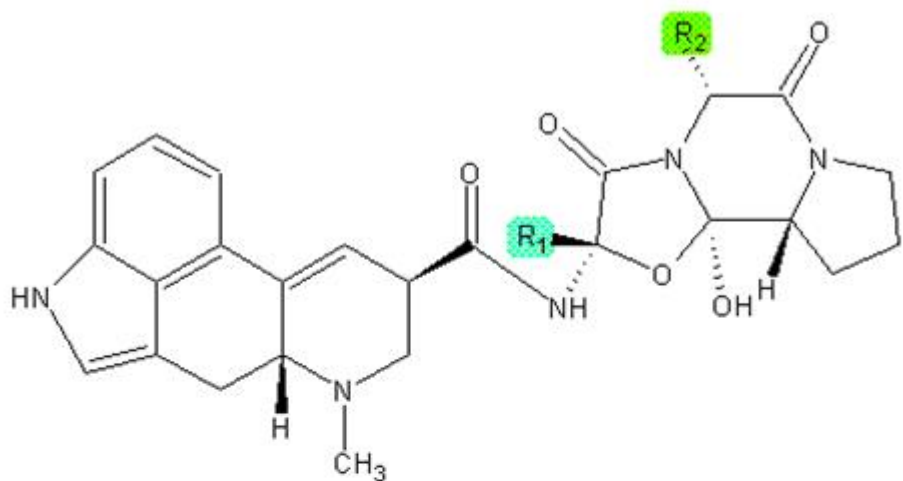
CBD kannabinol



CBN kannabinol

Alkaloidy występujące w sporyszu

Pochodne amidu kwasu lizergowego

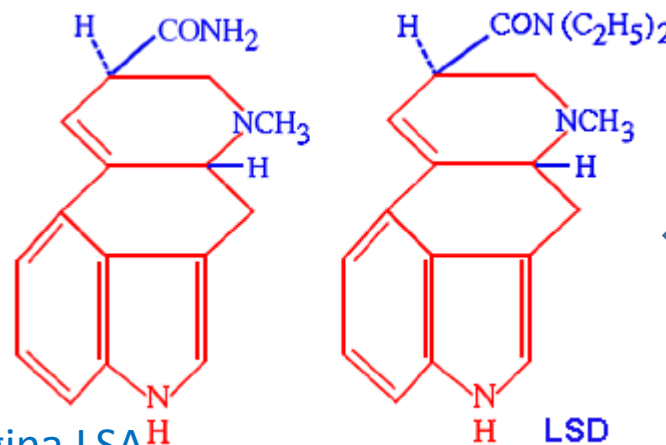


Kwas D-lizergowy

$R_1 = \text{CH}_3$
 $R_1 = \text{CH}_3$
 $R_1 = \text{C}_2\text{H}_5$
 $R_1 = \text{CH}(\text{CH}_3)_2$
 $R_1 = \text{CH}(\text{CH}_3)_2$
 $R_1 = \text{CH}(\text{CH}_3)_2$
 $R_1 = \text{CH}(\text{CH}_3)_2$

$R_2 = \text{CH}_2\text{CH}(\text{CH}_2)_3$
 $R_2 = \text{CH}_2\text{C}_6\text{H}_5$
 $R_2 = \text{CH}_2\text{C}_6\text{H}_5$
 $R_2 = \text{CH}(\text{CH}_3)_2$
 $R_2 = \text{CH}_2\text{CH}(\text{CH}_3)_2$
 $R_2 = \text{CH}(\text{CH}_3)\text{C}_2\text{H}_5$
 $R_2 = \text{CH}_2\text{C}_6\text{H}_5$

Ergotamina i jej pochodne (*Claviceps purpurea*)

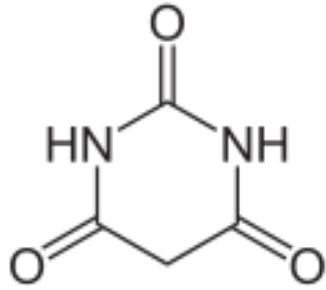


Ergina LSA
Z roślin powojowych

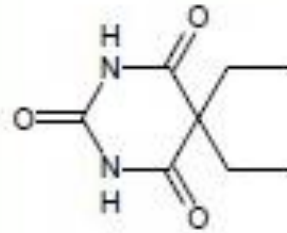
Dietyloamid kwasu D-lizergowego

Substancje psychoaktywne pochodzenia syntetycznego

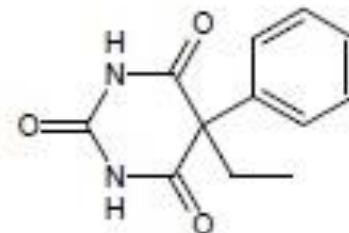
Barbiturany pochodne kwasu barbiturowego



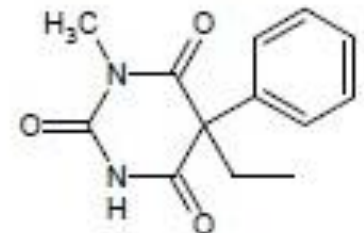
Kwas barbiturowy



Barbital
(Weronal)

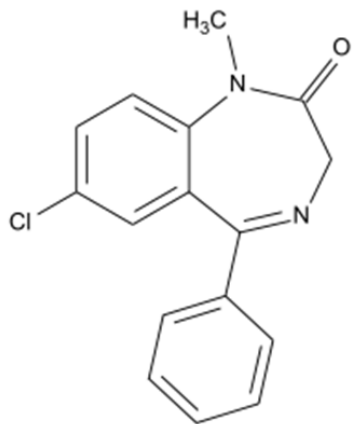


(Luminal)
fenobarbital

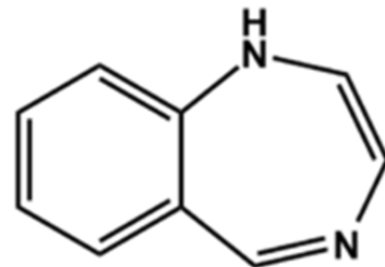


Prominal

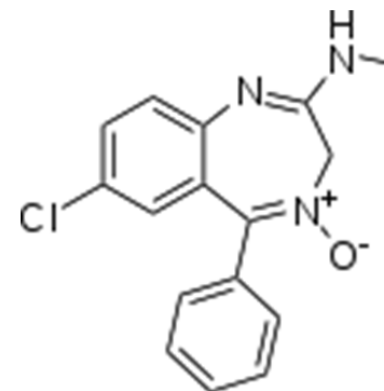
Benzodiazepiny



Diazepan
Valium, Relanium

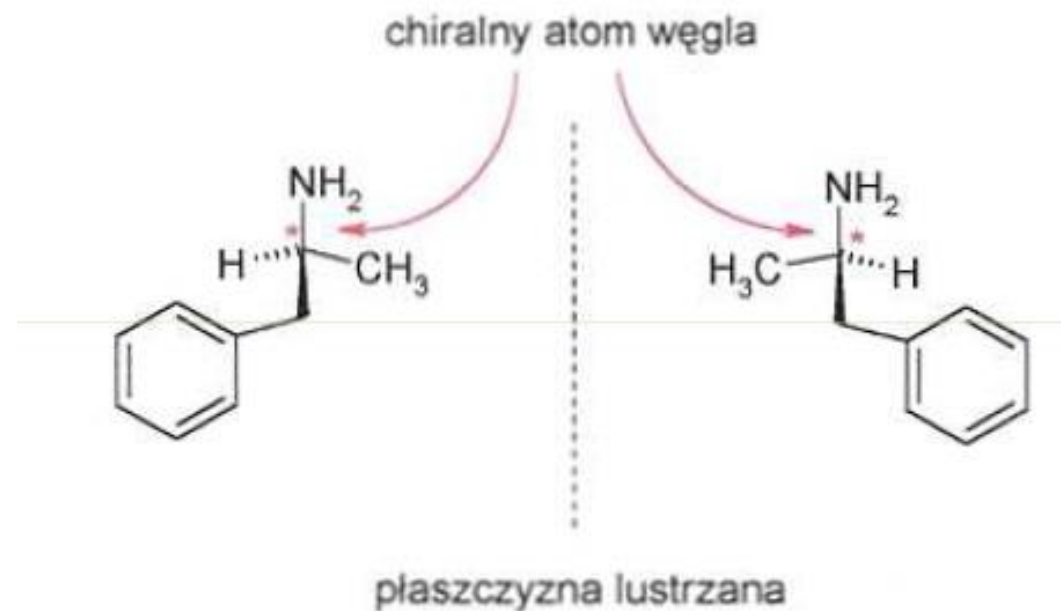
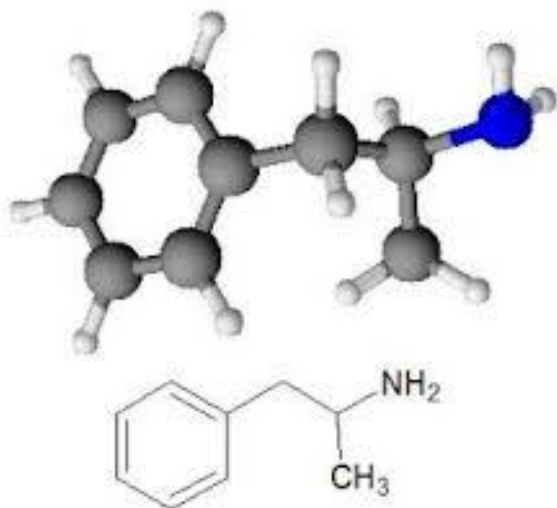


1,4-benzodiazepina



Chlordiazepoksyd
Librium

Amfetamina



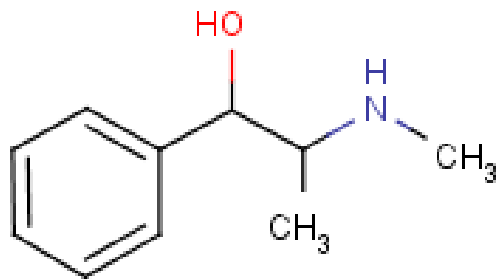
(+) - amfetamina

[α] = +21.8°

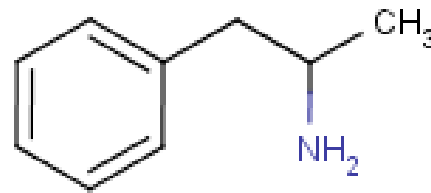
(-) - amfetamina

[α] = -21.8°

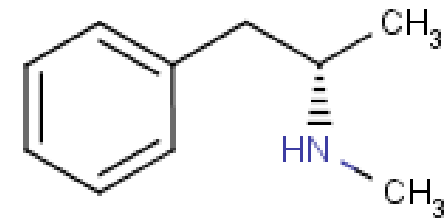
Porównanie struktury Efedryny, Amfetaminy, Metamfetaminy, pochodnych fenyletyloaminy



Efedryna

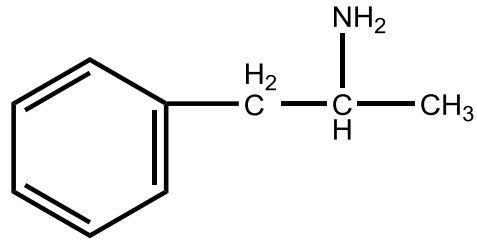


Amfetamina

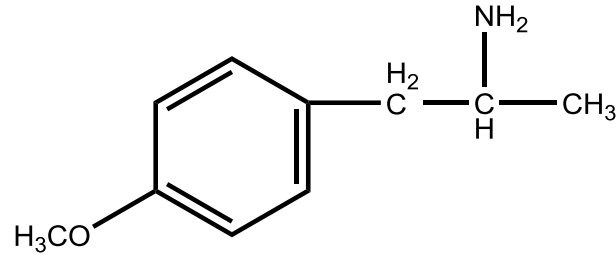


Metamfetamina

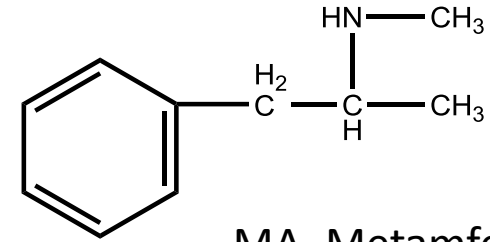
Amfetamina i jej pochodne



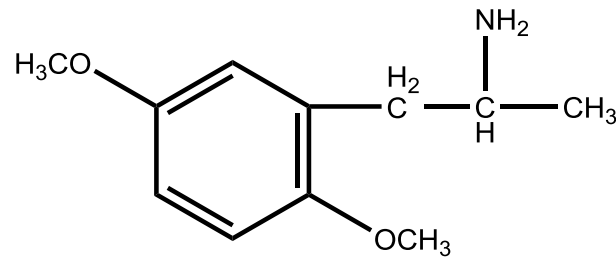
Amfetamina



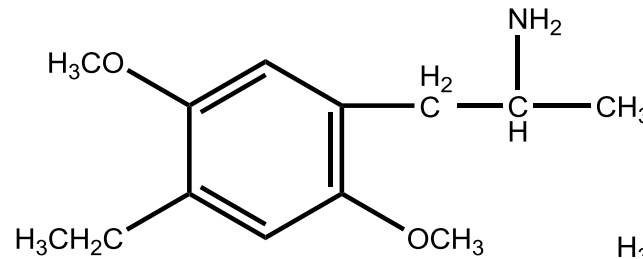
PMA, *p*-metoksyamfetamina



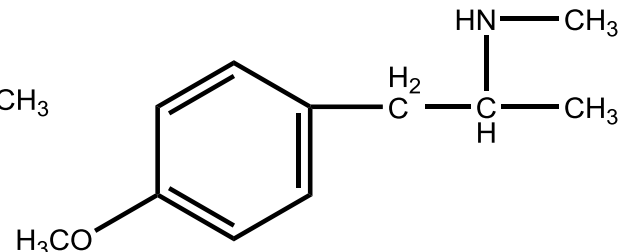
MA, Metamfetamina



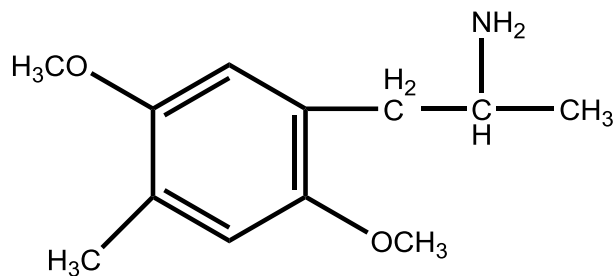
DMA, 2,5-metoksyamfetamina



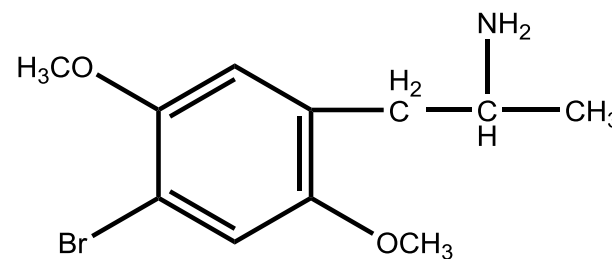
DOET, 2,5-metoksy-4-etyloamfetamina



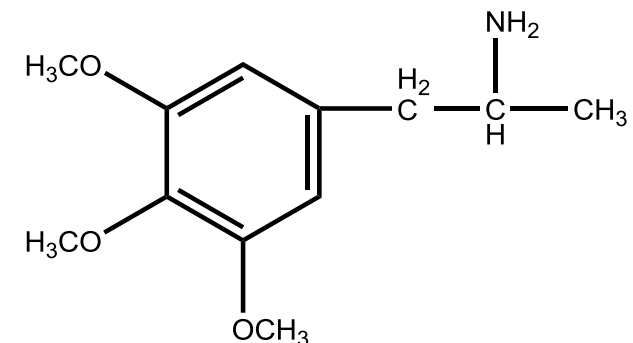
PMMA, *p*-metoksymetamfetamina



DOM, 2,5-metoksy-4-metyloamfetamina

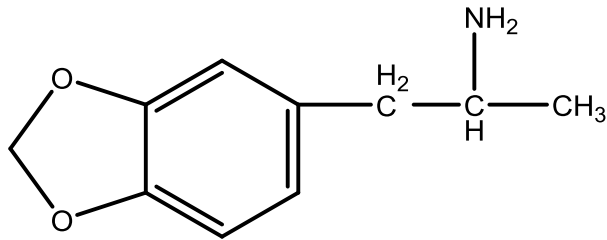


DOB, 2,5-metoksy-4-bromoamfetamina

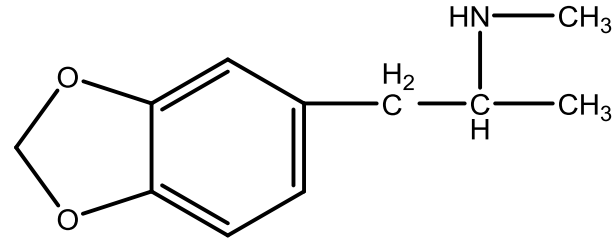


TMA, 3,4,5-metoksy-4-etyloamfetamina

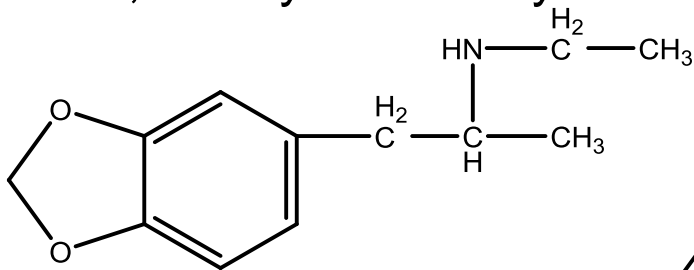
Entaktogeny



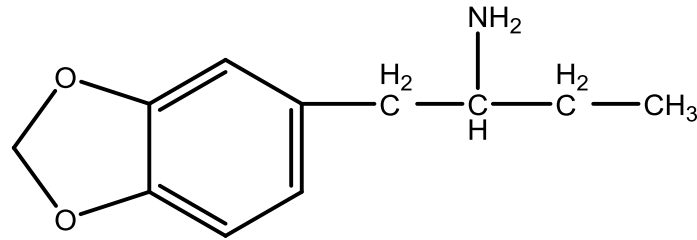
MDA,
3,4-metylenodioksyamfetamina



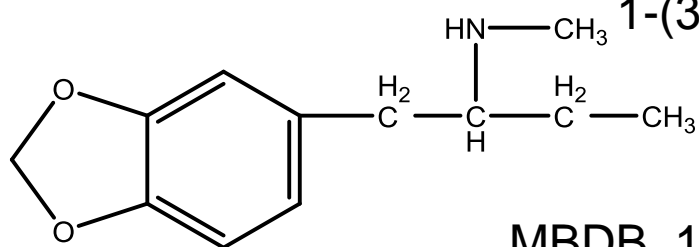
MDMA,
3,4-metylenodioksymetamfetamina, (**Ecstasy**)



MDEA,
3,4-metylenodioksy-*N*-etyloamfetamina

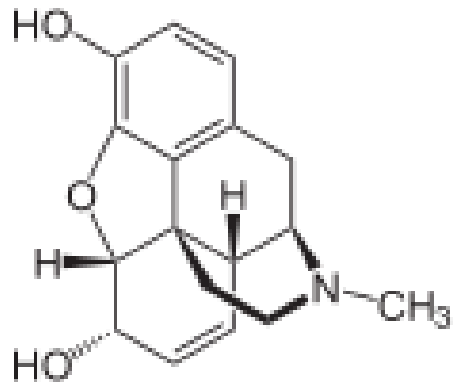


BDB,
1-(3',4'-metylenodioksyfenylo)-2-aminobutan

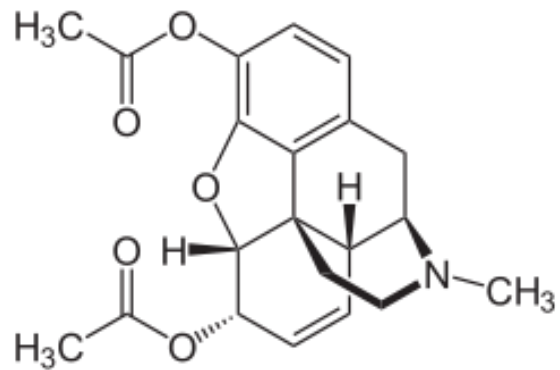


MBDB, 1-(3',4'-metylenodioksyfenylo)-2-metyloaminobutan

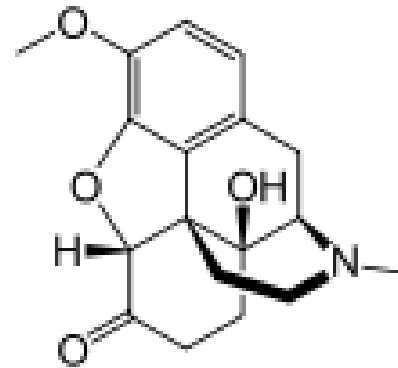
Morfina i jej półsyntetyczne analogi



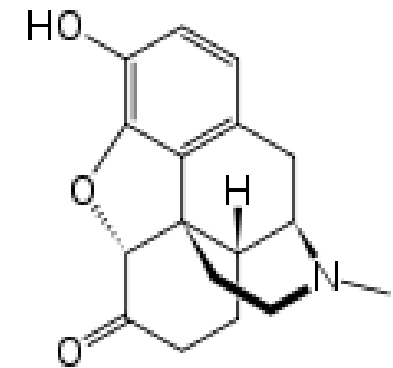
Morfina



Heroina

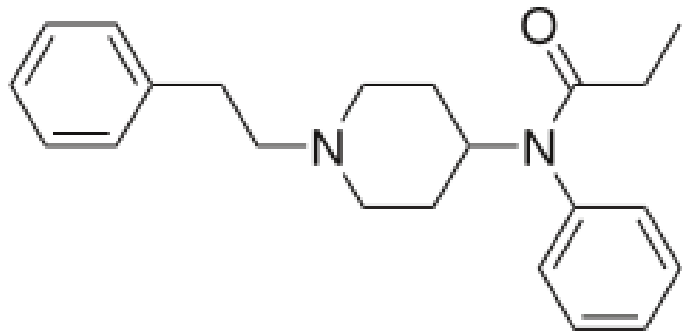


Oksykodon

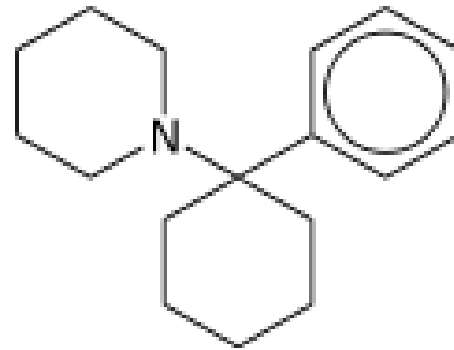


Hydromorfon

Inne narkotyki syntetyczne

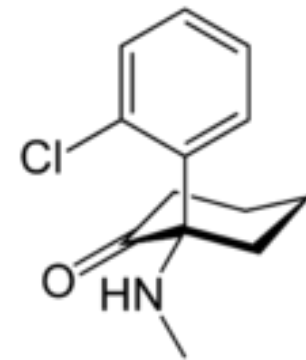


Fentanyl

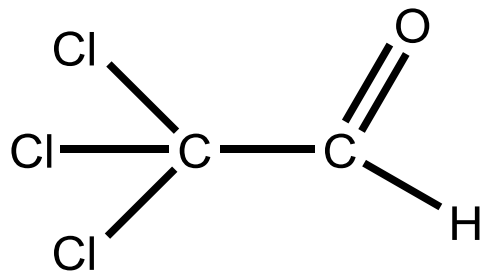


Fencyklidyna

PCP



Ketamina



**Chloral,
2,2,2-trichloroacetaldehyd**